

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. C. — THURSDAY, FEBRUARY 6, 1879. — NO. 6.

LECTURES.

THE COMMONER FORMS OF VESICAL DISORDER IN WOMEN.

BY WILLIAM GOODELL, M. D.,

Clinical Professor of Diseases of Women and Children at the University of Pennsylvania, etc.

VERY few women indeed are free from some kind of vesical trouble, coming on at one period or another in the course of life, and this fact leads me to think that a brief consideration of some of these maladies, this morning, will not be unprofitable, more particularly if it enable us to formulate some well-defined principles of treatment. The anatomical peculiarities of the bladder, its position immediately behind the hard symphysis pubis, its relation to and close connection with the womb and vagina, make this organ very liable to be influenced by disturbing elements. Classifying these causes according to their source, we find that for clinical discussion it will suffice to divide them into intrinsic causes, that is, those arising within the viscus, and foreign or extrinsic, those whose origin must be sought for outside of the bladder. The disorder itself may be either functional or organic, according to the customary mode of speaking, the latter including cases accompanied by structural change in the tissues; in the former no such local lesion exists, but from nervous sympathy or reflex action the vesical functions are interfered with to such an extent as to claim the attention of the physician. Urinary troubles, as you know, are not confined to women; they exist in both sexes; owing, however, to physical peculiarities, such as the shortness and the large bore of the female urethra, and the anatomical relations of the bladder to the pelvic organs, it is seen that vesical diseases in the female may vary considerably from those of the male, and therefore need separate mention. For instance, cystitis, or catarrh of the bladder, is far more frequent in women than in men; but, on the other hand, on account of the absence of a prostatic gland, and the short and capacious urethra, the former are, as a rule, less profoundly affected by it. Vesical troubles in women may arise from precisely the same causes as those of the other sex, such as urinary calculus, gonorrhœa, irritating urine, or a chill, but the most common source, beyond all question, is some uterine disorder, affecting the bladder either

directly, or through reflex action or irritation. The next cause in order of frequency is perhaps hysteria. The third would be represented by a class of injuries sustained by the bladder during labor; for instance, the nipping or contusion which it gets from prolonged pressure of the child's head.

Since disorders of the bladder are invariably stubborn, as well as most distressing and annoying to the patient, they are worthy of our careful study. I shall, however, barely refer to the constitutional or general treatment of such affections as are common to both sexes, since it will not vary in women, and therefore comes more properly within the province of my colleague, the professor of surgery. There are, however, for reasons that are obvious, certain points of difference which we are required to observe in the local treatment, and to which I will now direct your attention.

Whenever a woman comes to you with a history of frequent or painful micturition, you must first endeavor to seek out the cause, though this is often by no means an easy task. Is it organic, or functional, or emotional? Does it lie inside or outside of the bladder? are the questions you must ask yourselves, and carefully consider. In general, when the bladder troubles arise from a catarrh of its lining membrane, the recumbent posture gives but little ease; when, however, they spring from such outside causes as displacements of the womb and pelvic tumors, the bed affords marked relief. Sound the bladder for stone, while you examine its base by the index finger passed up into the vagina. Large stones can be felt and even outlined through the anterior wall of the vagina, while a small one will rarely escape detection by this double manipulation. The clinical history of the patient will throw light on the subject; the vesical distress may have followed a labor, and then it is apparent that some internal lesion must exist.

Next consider all the extra-vesical causes. Is a uterine tumor or a displaced womb pressing upon the bladder? Is the woman pregnant? — for the gravid womb often annoys the bladder by its bulk. Is the womb fixed by pelvic inflammation, and is the rectum perfectly free from fissure or hæmorrhoids? Or is the woman hysterical or nervous? If by pursuing this line of inquiry you have happily hit upon the cause, you will next try to remove it, if you can.

As a setting to these preliminary remarks, I shall bring in two patients. The first is a young woman who bore a child about a year ago. Since then she has never been altogether free from womb troubles, but she counts them as nothing when compared with the distressingly urgent and frequent desire to pass water from which she suffers. She tells me that her labor was a short one, but that the *ardor urinæ* did not come until she began to get about. She also says that she is most comfortable when in bed. Now this means either a stone or a foreign body

in the cavity, or it means some cause external to the bladder. It does not mean pure cystitis, that is to say a catarrh of the lining membrane of the bladder. Upon passing my index finger into the vagina, I find the neck of the bladder tender to the touch; pressing upon it above is the enlarged body of an over-heavy, retroverted womb. Here is a cause quite sufficient to produce all these symptoms, but I shall jump to no conclusion until I have first sounded the bladder. This I invariably do in such cases, because, if a stone be present, no treatment short of removing the foreign body will do good, and moreover the absence of a stone will confirm me in my diagnosis. I pass in the sound, and with my finger in the vagina raise the floor of the bladder to meet its tip. Finding no stone, and no rugosities on the bladder walls, in default of any other cause I am forced to conclude that it is the dislocated cervix that is distressing the bladder by its pressure. The remedy here indicated would be a pessary, which I shall at once put in, and charge her to wear. But the neck of the bladder may be so tender as to resent the intrusion of so hard a pessary as the Smith-Hodge, which is the best of all. In such a case, give belladonna in some form, and use the softest pessary you can find; Gariel's air-bag is one of the best. Our patient does not complain of the pessary, so that I have no doubt she will be able to wear it, and be ultimately benefited by it, with the assistance of a weekly local treatment to the congested womb. Let me say, in passing, that cases of frequent and painful micturition often occur in overtasked girls, or in sterile women of feeble frames, whose wombs are of natural size, but anteflexed. Now I do not think that, in the majority of these subjects, the dysuria is due to the pressure of the fundus of the womb upon the bladder. On the contrary, I believe the anteflexion to be the natural condition of the womb in virginity and sterility, and it therefore needs no local treatment. Vesical distress, in these cases, is neurotic or emotional, and arises from nervous exhaustion, produced in the one by brain cramming, and in the other by sexual excess. The bladder is hysterical, if you choose so to call it, and the motto of a hysterical bladder, as regards local treatment, should read, *Noli me tangere*. Building-up remedies and antispasmodics are here needed, together with belladonna, by the mouth, to allay the local irritation. And, by the way, let me here say that belladonna is a good stand-by in almost every form of vesical irritation. I usually give it according to the following prescription, which I can recommend:—

		Grms.
R ^y Atropiæ	gr. i.	06
Acidi acetici	gtt. xx.	1 60
Alcoholis,		
Aquæ	āā f3iv.	16 M.

S. Four drops before each meal, in a wine-glass full of water. To be increased or diminished according to the constitutional effect.

But the most troublesome and obstinate of all affections of the female bladder is chronic cystitis, which usually arises from the lesions produced by labor. It comes, however, from other causes as well. The worst case I ever saw came from a simple over-distention of the bladder. Some twenty years ago the lady traveled a whole day in a stage-coach, and from motives of delicacy did not empty her bladder. When at her journey's end, she could not pass her water, and had to call in a physician to draw it off. On that day sufferings began which have not up to this day ended.

Our second patient is a terrible sufferer from this disease. She has been in my hands, off and on, for many months, and I know her history by heart. It is as follows: Her first labor took place some three years ago. It proved a tedious one, and was ended by the forceps. The prolonged pressure of the child's head on the neck of the bladder so bruised it as to cause a very distressing cystitis, which baffled all treatment. In time she grew somewhat better, but a second pregnancy lighted up all the old symptoms, and she came to me when three months gone. In vain I tried all the stock remedies by the mouth, vagina, and rectum. Finally, as she could not come into the hospital for a local treatment, I forcibly dilated her urethra, and so much good was gained by this treatment that she was enabled to follow her duties with comparative comfort, and I lost sight of her for many months. But after her second labor she became much worse than before. She tells me that she now is called upon to pass her water from thirty to forty times during the day, and from five to ten times at night. Thoroughly worn out by these endless tormina, she has come to-day to have the operation of forcible stretching repeated. This treatment of cystitis by rapid dilatation of the urethra is somewhat empirical, though not entirely irrational. It presupposes the presence of a fissure in the neck of the bladder, which may or may not exist, and, in so far as that is concerned, its employment is empirical, because we rarely can tell beforehand whether such a lesion is present. But on the other hand, it over-distends and temporarily paralyzes the urethral and vesical sphincters, thus permitting the escape of the urine with as little pain and spasm as possible. In the majority of cases the dilatation is followed by great relief; often by a lasting cure. In the latter case we would attribute our success to the previous existence of a fissure, healed, as are analogous anal fissures, by the surgical manœuvre of overstretching. Since the fact is generally admitted that fissure of the sphincter ani often succeeds labor, it is by no means improbable to suppose that in like manner fissures may be formed in the urethral mucous membrane. But you must take this on trust, for I have never yet been able to feel what I could swear to as a fissure in the neck of the bladder. Let me show you how to perform this operation. First, of course, etherize your patient as ours has been, for

the pain it causes is otherwise unbearable. Next, pass in a uterine dilator, and gently stretch open the urethra, as I am doing. It distends readily, so as to allow me to coax in, very slowly, my little finger, which has been well greased with carbolated oil. I can feel the sharp edge of the vesical sphincter give way before it, and now it is wholly in. Withdrawing this, I slowly work in my index finger, which will sufficiently distend the urethra, and which goes in still more easily. Now I am able to feel the inner surface of the bladder, which is not thickened and rough, as one would suppose, from the severity of the symptoms, but smooth and velvety. I always take this opportunity to explore the bladder for stone or other foreign bodies; for the finger is a sound with brains in it, and therefore worth much more than the ordinary metallic sound. Usually the upper margin of the meatus is slightly lacerated by this operation, and sometimes free bleeding takes place. This, however, I have, with one exception, always been able to stay by a piece of absorbent cotton moistened with Monsel's solution. The exception occurred in the person of this very woman. When I previously dilated her urethra she was pregnant. The vessels of the vulva were accordingly enlarged and engorged, so that the bleeding from the slight rent of the meatus was altogether more than I had bargained for. As no astringent seemed to be of any service, I passed in a needle deep down to the bone, and closed up the wound by a stitch. Those of you on the front seats can see the notch in the meatus still left by the former operation. Candor compels me to mention one objection to this operation, and that is the possibility of permanent incontinence following it. In my own cases this has never happened, but I saw one example of it, in which the thumb had been forced into the bladder.

But supposing this dilatation does no good; what then? Put the woman to bed; drain off her urine by such a self-retaining catheter as the Skene-Goodman. It is so short that it barely goes in beyond the neck of the bladder, and the holes in its bulb are so small that the thickened and softened mucous membrane is not likely to be sucked into them and be torn off, as it will in the ordinary catheter with larger openings. If this should fail, try a milk diet and rest. Inject into the bladder, though never more than an ounce at a time, solutions of the silver nitrate, slowly increasing the strength by two grains every other day, until thirty grains to the ounce are reached. Keep the solution in the bladder not longer than five seconds, then withdraw it, and, if the pain be great, use a hypodermic of morphia.

Weak solutions of carbolic and of salicylic acids are highly spoken of; so especially are a two-grain solution of quinia and a five-grain one of chlorate of potash. Braxton Hicks lauds a two-drop solution of hydrochloric acid. He injects this daily, an ounce at a time, repeating it until the urine flows off clear. He then follows it with one ounce of water in which from one to two grains of morphia are dissolved.

One hint about the use of the ordinary flexible catheter in these cases: when drawing off the urine do not let the tip of the instrument go much beyond the neck of the bladder, else the mucous membrane will flap down violently upon it, and be bruised.

When fluids are injected the tip of the catheter need not enter the bladder at all, but preferably should stop just short of the neck. Sometimes every kind of treatment will fail, and then we may be obliged to put the bladder at rest by making an artificial vesico-vaginal fistula. There is one more disturbance of the bladder peculiar to females, and that is incontinence of urine that may be found to follow even such slight succussions as are imparted by laughing, coughing, or by running. This generally happens in women who have borne many children, but I have seen it as well in unmarried women of weak fibre. Apart from ferruginous preparations, the best remedy that I know for this infirmity is a combination of tincture of belladonna, fluid extract of ergot, and the tincture of nux vomica. If this fails I should recommend the application of carbolic acid, or of even nitric acid, to the urethra, with proper hygienic treatment.

THE PHYSIOLOGICAL PATHOLOGY OF THE HYDROPHOBIC PAROXYSM.

BY W. R. GOWERS, M. D.,

Assistant Professor of Clinical Medicine in University College, London.

I HAVE read with much interest the instructive papers of Drs. Curtis and Putnam on Hydrophobia which have lately appeared in the *JOURNAL*. The interpretation of the symptoms connected with the respiration centre seems, however, in one respect open to question. The point is of considerable importance, since what little rational therapeutic guidance we can hope for must be by a correct appreciation of the nature of symptoms, and especially of the early symptoms of the disease.

Is the sudden respiratory distress, so readily excited by various reflex influences, which constitutes the most striking symptom of the first stage of hydrophobia in many cases, and in some remains conspicuous throughout, due to inhibition or to overaction of the respiratory centre?

The well-known analogy between some of the symptoms in hydrophobia and those produced by an affusion of cold water may help to a better understanding of their nature. The latter are generally looked upon as a result of the stimulation of the respiratory centre by the cutaneous impression. The effect is a series of sudden inspirations with a sense of shortness of breath. No doubt the respiration is of the costo-

superior type, but this fact is, I think, susceptible of explanation. In the case considered the cutaneous excitation is followed by an immediate inspiration. The latter is evidence of a stimulation of the respiratory centre, and in the absence of any evidence to the contrary we are justified in assuming that the stimulation of the centre is the direct effect of the excitation of the cutaneous nerves. The effect may be very strikingly witnessed in the case of many young children, in whom the reflex actions are so strong. A puff of air, as by blowing, on the face of a baby is instantly followed by a single inspiration. That a very strong irritation of the fifth nerve may inhibit the respiratory centre is in perfect harmony with the fact that a slighter stimulation may excite the centre, because the same difference of effect between slight and strong irritations is seen with many reflex actions. The sense of want of breath, so far from being evidence of inhibition of the respiratory centre, is proof of its excitation, because the sensation is the effect on the sensorium of the stimulation of the centre, or at any rate so invariably accompanies that stimulation under physiological circumstances that we are justified in regarding the two as cause and effect.

The analogy of the effect of a cold affusion to that of a draught of air in hydrophobia is too close to make it necessary to apply in detail the above somewhat commonplace considerations to the phenomena of the disease. These appear to me all to point to an overaction of the respiratory centre on reflex excitation, the overaction being probably of the nature of diminished resistance not to inhibitory, but to excitatory stimuli. The peculiar type of the respirations may best be understood by considering the respiratory centre as consisting — as it must consist physiologically, though perhaps not anatomically — of two portions, one having to do with the process of normal breathing, and one with the process of extraordinary breathing. The latter is that which is chiefly related to the path of cutaneous stimuli, and which is especially excited by that means; so that the costo-superior respiration (almost all the muscles of extraordinary respiration acting on the upper part of the thorax) occurs, it may be after, it may be without, a normal inspiration. This does not suggest any inhibition of the centre for normal inspiration, because the over-sensitiveness of the centre for extraordinary inspiration is so great (as evidenced by the extremely weak excitation necessary) that any disproportion between the action of the two parts may be amply accounted for. It is evidently an important condition in physiological economics that stimulation of the extraordinary centre should not involve stimulation of the other, because the extraordinary centre commonly acts after the other has reached its full extent of action. During an extraordinary inspiration the diaphragm cannot act with effect on account of the position of the ribs, and commonly does not act.

If the phenomena of the hydrophobic or "aerophobic" spasm depended on the reflex inhibition of the centre, the inspiratory efforts, however partial, and the sense of want of breath could only be accounted for by a gradual stimulation of the inhibited centre by the accumulation of the physiological stimulus anoxæmia; and if the centre is inhibited, a greater degree of anoxæmia would be needed to liberate the inspiratory movement than in health. But such a theory both the aspect of the patient at the onset of the paroxysm and the instantaneous effect of the cutaneous stimulation seem to exclude.

The nature of the symptoms and lesions in hydrophobia seem to suggest that the poison has an action on the nervous centres in the following order: the medulla oblongata, the cerebral hemispheres, the spinal cord. The effect on the medulla is the first, most intense, and most constant, especially in the early stages. The action on the spinal cord is rarely marked, except in the latest stage. The action on the cerebral hemisphere is chiefly shown in the delirium which is so conspicuous in some cases in the later stages, and which indicates a much more extensive and profound disturbance of the hemispheres than exists in the early stages. In the latter, the chief affection of the higher functions is in the same direction as the affection of the lower, and, as Drs. Curtis and Putnam point out, the disturbance of the higher centre appears to intensify the disturbance of the lower. It seems possible, also, that the direction of the early affection of the cerebral hemispheres may be determined by the central effect of the bulbar disturbance.

No doubt the primary irritability of the respiratory centre is a sign of weakness, and in many cases passes on afterwards to exhaustion and failure, just as it may lead to the imperfect action between the paroxysms. But in some other cases the evidence of disturbance of the respiratory centre ceases entirely during the later stages of the disease. The pathological changes which are found in different cases, similar in character, vary much in degree, and, though almost always most intense in the respiratory region of the medulla, are in some cases much more marked in the cerebral convolutions or in the spinal cord than in other cases, just as are the symptoms, and hence probably certain "types" of the symptoms may be conveniently established. The variation of the changes in degree seems to suggest that although they doubtless have their own results they are the consequence rather than the cause of the disturbance of the nerve centres, which may be best ascribed to the primary effect of the poison on the nerve elements. I may add that at the Bath meeting of the British Medical Association I showed before the hydrophobia committee sections from four cases in man, which I have examined, and from one case in the dog. The lesions were in every instance similar to those found in the four earlier cases published in the *Pathological Transactions*. In the dog they were

similar in seat and character, but more intense. As a striking illustration of the similarity of the lesions in this disease, I may mention that two persons who had seen the specimens exhibited at the Pathological Society, after inspecting the sections at Bath, remarked that they at once recognized the sections as those which had been shown at the Pathological Society, the fact being that they were from different cases of the disease.

WOODBERRY VERSUS ROBINSON.

It is commonly supposed that in all actions at law involving medical questions the testimony of physicians, and especially of medical experts, is an important and necessary element to a clear understanding of the case. But the recent decision of a probate judge, coupled as it was with a recommendation as uncalled for and unjudicial as it was novel, seems to imply that lawyers are fully as competent to decide upon purely medical questions as the doctors themselves.

In the case to which we refer the point at issue was whether the defendant, father-in-law and guardian of an insane person confined in the McLean Asylum, at the request of his wife, and upon the certificate of two properly qualified physicians, one of whom was an expert in mental diseases, the other a prominent and leading practitioner of this city, was a proper person for that position; whether he ought not to be removed, in that the plaintiff had recovered by reason of his return to sound mind and understanding; and whether, if a guardian should be necessary, one less obnoxious and displeasing should not be selected. The testimony for the plaintiff failed to prove the guardian's unsuitableness and his ward's sanity, notwithstanding the number and character of the witnesses, and their well-known disinterested probity. The plaintiff was placed on the stand by his attorneys, and his conduct, while it may have been a matter of great surprise to his legal advisers, too faithfully portrayed the unsettled condition of his mind and his evident want of self-control.

The testimony for the defendant, however, showed that the guardian was appointed by this same probate judge; that he had always been attentive to the wants of his ward, and had abundantly supplied him with the necessary comforts of life, the testimony of his mother to the contrary notwithstanding; that the plaintiff labored under delusions of realistic wealth, and indulged in extravagant and exaggerated statements generally; that he was violent, paroxysmally excited, and, at the time of the trial, unsafe to be at large; that he entertained feelings of hostility towards his guardian, and was constantly threatening him in one way and another, — would have his heart's blood, would mutilate his person, would strip him of his property, would imprison him, would

have recourse to law, — simply because he was his guardian, and had placed him in an asylum for the better protection of the man, and as a means of prolonging his life if possible. It was further proved that the plaintiff was easily excited, was readily thrown off his balance, and that on the part of those who had charge of the case the utmost care and circumspection were needed to prevent outbursts of excitement, as well as to quiet a mental state always on the eve of an explosion; that he had the peculiar modification of speech characteristic of general paresis; that he had been examined by a number of prominent physicians, all of whom were agreed as to the nature and hopelessness of the case; that he enjoyed certain liberties, and was allowed as many privileges as was consistent with a judicious and proper treatment of the case; and finally, that the offer to go outside with a trained and experienced attendant, at a proper time, had been angrily rejected on the ground that he was "all right," and not insane.

The only medical expert called was Dr. Walker, of South Boston (the officers of the asylum being subpoenaed as witnesses testified merely to facts), and he stated that the plaintiff was laboring under that variety of mental disease known as general paralysis of the insane, from which there is no known release except in death; that the more comfortable state in which he seemed to be was only apparent, not real; that though incurable, and the disease of limited duration, such cases were much better off and survived longer under the judicious, well-regulated, and restricted life of an asylum than when surrounded by the liberties and temptations of an unrestrained and ill-regulated life. Notwithstanding this evidence, fully corroborated by a large number of witnesses, the judge, while he did not decide to release or change the guardian, did, however, state that as, *in his opinion*, there was a chance for the plaintiff's recovery, and as it was unsafe for him to return to his family, and as it appeared he was too much irritated by the restraint of an asylum life, the plaintiff should be removed therefrom, intimating that an extended tour with an attendant would prove highly beneficial, and perhaps induce the recovery of which he was so confident!

The matter has an especial interest to all the members of the medical profession, in that it shows that there is a tendency on the part of certain judicial lights to ignore important medical expert testimony, whereby only a thorough, competent, and satisfactory knowledge of any medical case can be obtained. A case similar to this recently occurred in New York, and if such a course is to be pursued in the future what security will physicians have that justice will be done to an insane man, to his friends, or to the asylum officers; that fairness, impartiality, and a thorough, honest consideration of a case will have just recognition? To admit insanity, to deny an application for a removal and discharge from guardianship, on the ground that a man is violent, unsafe, easily

irritated, and paroxysmally excited, and then in direct contradiction to the well-known fact that general paralysis is absolutely incurable, as was done in this case, for a judge to advise removal from an asylum, simply because he felt that the man was better than when admitted, and his recovery possible, is certainly a novel legal procedure, worthy of criticism.

It is of course desirable to protect the interests of the insane, but it is none the less important for the welfare of society that sense should not be overridden by sentimentalism, and that dangerous men should not be let at large in the community. In such a case as this we need a few of the safeguards of English law, whereby any one who takes the responsibility of removing a dangerous patient from custody is obliged to give bonds that nothing shall happen to the injury of any person or property by his course.

[NOTE. It is interesting to know, as a sequel to the Woodberry case, that the patient has become unmanageable in California, his case having been pronounced to be one of general paralysis, and his return home advised. He is said to have failed considerably, having partially lost control of the sphincters, and having at times been violent, requiring two attendants to care for him. On board ship it was found necessary to put him in irons for a time. He returns to the McLean Asylum.]

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.¹

BY D. H. HAYDEN, M. D.

*Examination and Semeiology of the Ear in Childhood.*²—Dr. Julius Böke, instructor in diseases of the ear in Pesth University, Hungary. The use of the Eustachian catheter is impracticable before the fifth or seventh year, and in very young children we can obtain no information as to the functional activity of the organ of hearing. Our examination is therefore limited to the external ear, the external meatus, including the drum membrane, and the nasal cavity. An imperfect development of the external ear points to an intra-uterine arrest of growth. We find coexisting, as a rule, an absence of the meatus and of the tympanic cavity. Even when this absence is limited to one side there is generally complete deafness. Subjective symptoms, denoting some pathological change, are rarely met with before the fifth or seventh year. Certain physiological processes, which are ordinarily terminated during the first three or four months of life, may last on into the second year. The cavity of the tympanum, namely, in new-borns is filled with an

¹ Concluded from page 155.

² Jahrbuch für Kinderheilkunde, N. F. xii. 4, 1878.

abundant secretion of mucus, which later gives place gradually to air, finding its way through the Eustachian tube. The mucous membrane of the tympanum and of the drum membrane, which, in the adult, has nearly disappeared and become merged in the periosteum of the tympanum and the membrana propria of the drum membrane, still exists at this period of life, and is abundantly supplied with mucous glands, and is more or less puffed up. We can easily understand that under these conditions the power of hearing is possessed only in a very slight degree; and doubts are entertained by many authors whether newborns and infants up to three or four months of age can hear at all. The perception of loud noises does not of course determine the existence of this power, for deaf and dumb persons are able easily to distinguish the sound of a drum and the ringing of bells. The best test to make use of in older children is the human voice.

The direction of the meatus externus in childhood is more vertical than in the adult, and consists of a membranous cartilaginous tube, ossification proceeding gradually, and not being completely effected until the tenth year. There remains occasionally in the anterior lower wall a spot the size of a lentil which does not become ossified. The dura mater penetrates through the fissura petroso-squamosa to the mucous membrane of the tympanum; and there is thus established a communication between the abundant blood-vessels of this membrane and those of the membranes of the brain. We therefore find a plausible explanation of the cerebral symptoms that often accompany diseases of the ear, as well as of the frequent extension of inflammation to the parotid gland and inferior maxillary joint, and of the existence of sinking abscesses in the neighborhood of the ear without caries. A frequent seat of such abscesses is over the mastoid process, a fistulous passage extending outwards from the external meatus and terminating over this process. In connection with purulent affections of the external meatus there are often found swelling and hypertrophy of the glands of the neck without necessarily implying the existence of scrofula. A rational treatment of the so-called otorrhœa causes their disappearance. The same can be said of the pale, pasty complexion accompanying these discharges, due to faulty nutrition, upon which a chronic suppuration exercises no small influence. Where a scrofulous diathesis, as manifested by other symptoms, is not present, a healthy, blooming look is restored with the cessation of the discharge.

Foreign substances not rarely get into the ears of children. Larger objects never go beyond the bend in the anterior lower wall. No trouble is caused by their presence; but unskillful attempts to remove them are often followed by serious inflammations. Insects sometimes make their way into the ear, and cause violent pain by their movements. In chronic suppurations of the external meatus flies are sometimes expelled during

syringing, and in the summer five or six larvæ may fill the ear and adhere so firmly as to be removed with great difficulty. Large horse-flies find this a favorite spot to lay their eggs, and their maggot is so large as alone to entirely fill the passage. Long-continued and neglected inflammations can be the cause of funnel-shaped strictures of the meatus. The canal can become completely closed by the growing together of the two inflamed surfaces, and be finally the seat of a trough-shaped cicatrix, a *restitutio ad integrum* being no longer to be spoken of.

Idiopathic isolated inflammation of the drum membrane is not frequent. Dark grayish membranous formations are sometimes seen firmly adherent to the drum membrane. Under the microscope they prove to be a fungus,—the *aspergillus glaucus*. Linear perforations are caused by sudden compressions of air, as boxing the ear. Large losses of substance are due to suppurative inflammations of the tympanum. When the perforation is small it sometimes becomes filled with a watery mucus, or with pus, and, reflecting the transmitted light, is seen as a shining spot, pulsating synchronously with the heart's beats,—the so-called pulsation in the membranum tympani. Round circumscribed opaque spots and crescent-shaped deposits of lime are to be regarded as the sequelæ of inflammatory processes in the tympanum. Round spots are sometimes met with which appear thinner than the neighboring parts. These are the seats of earlier perforations, closed by thin cicatricial tissue.

We often find nasal catarrh and deafness associated together, and the latter is then due to an obstruction by mucus of the pharyngeal opening of the Eustachian tube; or else the catarrh has extended into the tube itself. Enlarged tonsils of themselves do not occasion deafness. In cases of long-continued suppuration of the tympanum streaks of pus which have escaped through the Eustachian tube are sometimes to be seen on the walls of the naso-pharyngeal cavity. Deafness may be caused by syphilitic ulceration and cicatrices at the mouth of the Eustachian tube, thereby obstructing it.

Acute inflammation of the tympanum is often ushered in by severe cerebral symptoms. The formation of pus in this cavity and its escape by perforation of the drum membrane are often preceded by high fever, loss of consciousness, delirium, hyperæsthesia of the cutaneous surface, and convulsions, which symptoms last sometimes two or three days, and then cease abruptly with the escape of pus from the ear. The author emphatically urges the importance of always making an examination of the ear in cases presenting such stormy and disquieting symptoms, even when there is no evidence of pain in the ear; for there are no prodromal symptoms peculiar to inflammations of the tympanum, and we are unable to obtain from infants a description of the seat of their pain. The rapid disappearance of these severe symptoms, with

the establishment of the so-called otorrhœa, might lead to the erroneous opinion that the latter were a *noli me tangere*, and that its cessation would necessitate some other evil, a view held quite commonly among the laity, and, what is to be regretted, not infrequently by physicians. When the discharge is of offensive odor and of cheesy consistency this is due to a want of proper means for effectually evacuating the pus which accumulates in the tympanum and deeper parts of the external meatus, and decomposes.

Where inflammation of the tympanum lasts months or years, and caries ensues, this can attack vital parts, as, for instance, the anterior bony lamella that forms the carotid canal. A fatal hæmorrhage from this cause happens more frequently with children than with adults. Where paralysis of the facial nerve occurs, this is not always the result of caries of the Fallopian tube. The bony wall of this tube may be wanting, and the neurilemma be in intimate contact with the mucous membrane of the tympanum. The paralysis may thus be the result of an inflammation of, or of a collection of pus in, the Fallopian tube itself. It is not rare for caries of the tegmen tympani or of the walls of the fossa sigmoidea to take place, followed necessarily by a destruction of cerebral substance or by abscesses in the brain, with fatal termination. Cases have been reported where carious portions of the petrous bone, cochlea, etc., have been discharged with the pus, and recovery has taken place. In most cases, however, the thickened walls of the tympanum act as a protection to the labyrinth, and prevent its invasion by extension of the inflammation. In many autopsies, where there had been caries of the walls of the tympanum, with loss of the hammer and anvil, the author has found the stirrup firmly imbedded in the fenestrum ovale.

Diseases of the labyrinth and of the terminations of the auditory nerve present very little in the way of distinguishing symptoms. In many cases of deaf-mutism nothing abnormal is found in the conducting apparatus of the ear.

Total deafness, with a staggering gait, which latter, however, disappears in the course of a few months, is sometimes met with in children as the sequelæ of a severe illness. This disease attacks children up to eight years of age, and sometimes appears as an epidemic, though it is also met with sporadically. The author had opportunity in 1868 and 1869 to see many such cases. Without premonitory symptoms, a child falls suddenly down with a sharp cry, is unconscious, has high fever, with the head bent backwards, and becomes completely deaf. Examination of the ears shows, as a rule, no pathological changes, though sometimes there are found the signs of an inflammation of one or both tympana. It is difficult in such cases to decide whether we have to do with an epidemic cerebro-spinal fever, or if there be apoplexy or some other pathological

process at the place of origin of the auditory nerves. The author is inclined to the latter view. With the exception of deafness we find no other functional disturbance; and the facial nerve, which is intimately connected with the auditory nerve at the base of the brain, is not affected.

*Fifteenth Annual Report of the Jenner Children's Hospital at Berne for the Year 1877.*¹—Professor R. Demme gives statistical statements of the results obtained with different artificial infants' foods, and reports several cases of so-called "fat diarrhœa of infants." In these cases the fecal discharges contain a very large percentage of fat, and Professor Demme abandons the use of milk, substituting a mixture of white of egg in water, with addition of milk, sugar, and a little cognac. As medicament he uses minute doses of calomel and opium, and employs lukewarm baths, wrapping the body in cloths wrung out with water.

There came under observation in the out-patient department a family in which a boy five years old was taken sick with scarlatina unaccompanied by diphtheria. Later, two girls of the same family were attacked by diphtheritis faucium. One of these girls, during convalescence and twenty-three days after the beginning of the disease, was sent into the country. Eleven days after her arrival, a boy seven years old, living in the same house, was taken sick with a mild attack of scarlatina without diphtheria.

Of two cases of pseudo-muscular hypertrophy in brothers, aged respectively ten and eight years, it is worthy of note that the urine of one of them contained sugar in large amount, though not present continuously.

Experiments with chloroform, bichloride of methyl, and chloride of ethyl proved the first to be always the most suitable for anæsthetic purposes.

Cases of bronchocele were repeatedly met with. Of these one was an acute case, which came on in a patient affected with intermittent fever. The tumor increased in size perceptibly during each paroxysm. Quinine cured the intermittent fever, and shortly afterwards the tumor also disappeared.

Paracentesis Thoracis.—Two cases have been recently published where this operation has been performed at the extremely early age of four months. The first case occurred at the London Hospital, in the service of Dr. T. Barlow.² A. F., aged four months, had been ill six weeks with cough and some diarrhœa, but without dyspnœa in the ordinary sense. Physical examination pointed to an effusion in the left side of chest. An exploratory puncture was made with a hypodermic syringe,

¹ Berne. 1878. 56 pages. Centralblatt für die medicinischen Wissenschaften, November 2, 1878.

² British Medical Journal, August 31, 1878.

and pus was withdrawn. The patient was then chloroformed, and, with the aspirator, four ounces of pus were brought away. The subsequent course of the disease was a favorable one. Dr. Barlow remarked that in young children inflammatory processes were much more likely to suppurate than in the adult; and that, when we have to do with a doubtful dullness in a very young child, an exploratory puncture is important, as, if fluid be present, it is probably pus.

The second case referred to occurred in the North Eastern Hospital for Children, and is reported by Dr. Cayley.¹ George W., aged four months, had been suffering for one week previous to being brought to the hospital with cough and dyspnoea. Physical examination showed the presence of a large effusion in the left side of the chest. Aspiration was performed, and eight ounces of a turbid serum were removed. The dyspnoea was at once relieved, and did not return. One week after the operation the child was quite well, with the exception of a slight cough. The percussion resonance continued still much impaired, and the breathing was somewhat tubular. This was the first case of the kind that had been met with at this hospital under twelve months of age, although it was the practice to auscultate every child suffering with dyspnoea. Several cases of empyema and of simple pleuritic effusion in children between twelve months and two years of age had been published.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

E. G. CUTLER, M. D., SECRETARY.

MEMORIAL MEETING TO DR. JOHN B. S. JACKSON AND DR. JACOB BIGELOW.

JANUARY 13, 1879. After the election of officers for the ensuing year the regular exercises of the society were omitted, and Dr. D. HUMPHREYS STORER was asked to take the chair, and preside over a memorial meeting to Dr. John B. S. Jackson and Dr. Jacob Bigelow. On assuming the chair Dr. Storer said:—

“Gentlemen, as the only survivor of the twelve gentlemen who met in 1828 to form this society, I comply with your request. My brothers, we have met to pay a tribute of respect and esteem and affection to the memory of a departed friend. Elsewhere a glowing eulogy has already been offered by the same truthful hand which has portrayed the characters of Wyman and of Clarke. But it has been thought well that some token of our regard, some expression of our deep bereavement, should be entered upon our society's records. You well know the devotion of Dr. Jackson to the interests of this society; for many years he has been unwearied in his attendance upon our meetings. With what fidelity and enthusiasm he engaged in our discussions! With what pleasure and pride he dwelt upon its usefulness! He has left a great void; we feel it; we are here to acknowledge it.

¹ *Lancet*, December 7, 1878.

"Nor should we forget to recall the example of our elder brother, for so long a time New England's medical luminary. Its light is extinguished, but succeeding generations will gaze with admiration upon its former illuminated track."

A committee of three, consisting of Dr. Henry I. Bowditch, Dr. Morrill Wyman, and Dr. Calvin Ellis, was appointed to present resolutions on both Dr. Jackson and Dr. Bigelow, and in the mean time the chairman called for remarks by any of the members.

DR. AYER said, "A feeling of sadness pervades the hearts of us all this evening, Mr. Chairman, in view of the sudden death of our late worthy associate, Dr. J. B. S. Jackson. The record of the last meeting of the society, only three short weeks since, just read by the secretary, vividly reminds us that our departed friend was present on that occasion, and reported cases, and made extended remarks on a variety of topics presented. He was one of the oldest members of this society, and it is no injustice to others to say that he was our most active and efficient member; indeed, he was the backbone of the association. The Anatomical Cabinet is a monument of his untiring industry and patient care. The interest of our meetings was constantly promoted by his unflinching presence and zealous efforts. We, more than others, will feel this sad bereavement; and each individual, like myself, must feel that in his death he has experienced a serious personal loss. How or when, if ever, this great loss can be repaired we know not.

"My recollections of Dr. Jackson are especially pleasant. In the winter of 1845-46 I came to Boston, and soon after formed his acquaintance. He was then in the vigor of early manhood, and eagerly devoted to his specialty, pathology, and more or less engaged in general practice. It was my fortune to meet him frequently, and I was early impressed by the purity of his character, his inflexible integrity, untiring industry, and tenacity of purpose. There was an exactness and precision in all his aims, and a method in their execution, which rendered his teachings lucid and attractive. The care and delicacy which he always manifested in dealing with the language and motives of his professional brethren formed a prominent feature of his character. As a practitioner he was eminently conscientious. This very morning I met a lady, whose family Dr. Jackson attended for many years, who spoke of him with tender emotion, recalling his gentleness of manner and great kindness and sympathy shown in trials. When one of the children was sick the doctor made an extra visit at eleven o'clock at night, walking a mile, to be sure that the medicine was given correctly. May the lessons of such a bright example, and also those from the life of Dr. Jacob Bigelow, the patriarch of our profession, so lately passed away, prove lasting and salutary in their influence."

DR. CHEEVER said that he felt some modesty in speaking before many of the contemporaries of Dr. Jackson, but there was one point he wished to dwell on in Dr. Jackson's character: the lesson of his life was *devotion to an idea*. Single-hearted and unwavering pursuit of an idea in life always led to success. Most physicians were diverted from the sole pursuit of science by the pressure of other claims to their attention: some by social claims, some by wealth and ease, some by money-getting, and some by public life. Dr. Jackson had

devoted his whole life, his whole heart, and his whole strength to the sole cultivation of pathological anatomy, and he had pursued this all through his earlier years in poverty. He was the first pathologist of the United States in order of time, and long stood alone. He was also, hitherto, the first pathologist of America in order of eminence. He could be compared to Rokitsansky and to Cruveilhier, whom he was so fond of quoting. The later microscopic school, the histologists of diseased tissues, he could not be compared with, for he did not belong to them.

He had his reward, for his was a singularly happy life, as is that of every pure devotee of science. Often thrown in with him during some eighteen years of his connection with the Medical School, Dr. Cheever had always regarded him as one of the purest and simplest of characters. He was always eager to apologize for the slightest apparent injustice done to others, and he was also ever most punctilious in awarding to every one the full credit of an idea, a case, or a specimen.

DR. HODGES spoke of Dr. Jackson's zeal and painstaking as an instructor, so well remembered by the students of twenty-five years ago, when there were no text-books on the subjects which he taught. His early lectures and demonstrations were exceedingly valued by the privileged listeners or witnesses, and his enthusiasm was a great stimulus to those who were brought into personal relations with him. He spared no labor or trouble to show to a single interested person the treasures of his museums, and such a visit was rarely forgotten. His methodical habits and precision were not easy to imitate, but however exacting he was in details he always secured the attachment of his assistants, and even of subordinates on whom the responsibility of executing his wishes devolved. He took a strong interest in young professional men, and was constantly testifying his fondness for young persons in general. He had no enemy, and the entire medical profession, and the community where he was so well known, held him in the highest esteem for his simple, unaffected earnestness.

DR. BOWDITCH, chairman of the committee, read the following resolutions:—

“Resolved: That this society has heard with the deepest sorrow of the recent death of Dr. John B. S. Jackson, whose honorable character and constant care for the best interests of this society have endeared him to all its members.

“Resolved: That the excellent anatomical cabinet of this society, now in the possession of Harvard University, had its origin, more than forty years ago, in Dr. Jackson's enthusiasm for pathological anatomy, and through his individual labors it has become one of the most valuable collections in the country; and therefore it is most fitting, according to a vote passed by the society May 8, 1871, that the specimens should be hereafter labeled as belonging to the Jackson Cabinet of the Boston Society for Medical Improvement.

“Resolved: That our warmest and most respectful sympathies are tendered to the widow and children of Dr. Jackson in this their great bereavement, and that the chairman and secretary of this meeting transmit to them a copy of these resolutions.”

Dr. Bowditch paid tribute to the constancy of Dr. Jackson's devotion to his department of medicine; his high character as a man, his pure sentiments, and

kindly feelings were alluded to. He never meant to give offense; although feeling himself supreme in his own department he at times spoke quickly. But these expressions all of us knew meant nothing but his professional zeal. His heart was too tender to allow him ever willingly to speak harshly to any one. He was always strictly truthful, and his character in this respect was delightful to reflect upon. He and the late Jeffries Wyman were alike in this particular, and in their hard labor on difficult and on what, to many persons, were uninteresting subjects. He died at the right time, as he could not fully accept, or perhaps appreciate, some modern methods of investigation; of the microscope he knew nothing, and he made no pretensions to such knowledge. He died full of fame and of the respect of the community. His final disease caused little or no pain, and he worked, up to within a few days of his death, in his favorite pursuits. It is a most touching reminiscence that, in the records of the last meeting, Dr. Jackson's name appears almost alone, and the earnestness and interest with which he talked of the specimens of well-united fractures, found in wild buffaloes of the West, will be long remembered.

The resolutions presented by Dr. Bowditch were unanimously adopted.

Dr. Jacob Bigelow. — Dr. Bowditch then presented the following resolutions in behalf of the committee: —

Resolved: That this society cannot permit this first meeting, since the death of Dr. Jacob Bigelow, to pass without recording its profound admiration of him as a man of rich literary and scientific culture, and as a physician of the highest rank; and the society recognizes in his death the departure from among us of the greatest and widest known leader of the medical profession in New England during the past century; and this leadership is owing to his early writings and teachings upon the occasional Self-Limitation of Disease, and in his reliance upon nature, as well as art, in the practice of our profession.

Resolved: That the serenity with which he bore his many afflictions, for so many years, excites our warmest admiration.

Resolved: That the society tenders to the widow and children of Dr. Bigelow its most respectful sympathy, and the chairman and secretary are directed to send them a copy of these resolutions."

Dr. Bowditch afterwards spoke as follows: —

"Dr. Bigelow was born February 27, 1786. I called upon him only a few days before he reached the end of his ninetieth year, and with a few words as preface, I will repeat the greater part of our conversation. I have ever acknowledged him as '*facile princeps*' of the medical profession of New England. He was naturally kindly. He had, at times, very decided opinions, and usually kept a complete control of his words in the expression of them. He had a great fund of genuine wit. He had always remarkably clear perceptions of things, and his opinion carried great weight, because his wise judgment prevented him from imprudent speech or action. I have at all times considered him one to whom I could appeal and feel sure of an honest reply. Those who were his intimate friends have always loved him. All may love him now, so beautiful does he seem as he lies helpless, but bright and tranquil, gradually approaching death.

"He was graduated in 1806, and having been born only ten years after the

revolution of 1776, his life nearly spans the centennial period. I knew he must have seen some of the principal actors of those early days, and I wanted therefore to get from his lips reminiscences of physicians, whose works I had read.

"As the Philadelphia School of Medicine has always been the most powerful of any in America, and as one of the professors was a signer of the Declaration of Independence, I asked Dr. Bigelow first about that school. Dr. Bigelow's manner of delivery was always very slow, and that slowness of speech had augmented at least fourfold. During our conversation, he sometimes seemed to have ceased wholly, so long were the intervals between his terse and clear utterances. In the earlier part of our interview, I am afraid I lost something by asking a second question before the first was quite answered. I will try to give, from my notes, taken at the moment, most of the remarks he made, and as far as possible in the very words:—

"Yes, I knew the professors of the Philadelphia school. They have always claimed to have the best doctors there. I and two others were the sole New England students. Rush and Wistar I knew. They were kindly, and the latter, especially, was warm-hearted. They received the students. Physic was a savage, and would have no intercourse with us. We never were allowed to enter his house. Barton (B. S.) was egotistical; a bad reader and speaker. Rush was enthusiastic and eloquent; a great believer in medicine and drugs. He was an ultra practitioner. He often said, "We can have no reliance on nature, gentlemen. We must turn her out-of-doors in our practice, and substitute, for her, efficient art." When I was in Philadelphia, there was constant battling going on between the professors belonging to the faculty. Rush and Physic were on one side, Wistar and Barton on the other. The Philadelphia school had many students from all quarters of the country except from New England. Very few went from here."

"I asked him about Drs. Hosack and Francis, of New York. He had little to say of them, and after I left he remarked to his daughter that he meant to have said something. As Carlyle says of Washington, I thought, from his manner, that he felt they were not very 'immeasurable men,' or such leaders of medical thought as the Philadelphians had been. I spoke of Nathan Smith, of Dartmouth College, and afterwards of Yale, a man whom I had always thought to be, and do still think, one of our greatest New England men,—a man of great natural powers, which, it is true, were but imperfectly cultivated compared with those of Bigelow. 'Smith?' said Dr. Bigelow. 'Well, I always thought him a quackish sort of man. He was inclined to claim Dartmouth as a great centre of medical learning.'

"Of the first president of the Massachusetts Medical Society, Dr. Holyoke, he slowly enunciated the following: 'Holyoke! Indeed, the only remarkable circumstance about him was that he lived till he was one hundred years old, and was bright then.' I do not think that Dr. Bigelow had a sufficiently high estimate of the worth of either of these men, who were really great in our profession. If they were not leaders, I know not who may be deemed leaders. Certainly they both stood, and stand now, preëminent among their associates in the medical societies of that day.

"I then turned his attention to Louis, and to the effect, if any, produced by

him and by his works, and he spoke somewhat as follows: 'Before Louis's coming, a great many believed implicitly in the power of medicine to cure diseases, and it would have been deemed a heinous dereliction of duty not to prescribe a certain round of medicines in every disease. For example, when I began practice, I myself always felt obliged to give an emetic in every case of supposed commencement of fever, or I should have been held, and should have considered myself, as responsible for the death of the patient, in case he should unhappily have died under my charge. Louis checked all this, and taught us the importance and necessity of a closer study of medicines and of each fact in medicine.' Though Dr. Bigelow said little if anything more, I inferred that he considered Louis's influence good in overcoming the tendency to believe in the common rules, previously laid down for medical practice, and to which Dr. Bigelow had himself submitted for a season.

"We then spoke of the times when Asiatic cholera struck our shores. He immediately commenced the following account, and went on uninterruptedly, save by the long intermissions between his terse, nervous sentences, as above alluded to: 'Yes, I remember those times. There was intense excitement in Boston when the news came of cholera breaking out in New York. The city council immediately chose a medical commission to visit New York, in order to learn all that could be ascertained for the benefit of Boston as to the treatment of the disease. I, Dr. John Ware, and Josh. Flint (at that time the doer of the drudgery of the city work, called city physician) were the sole members of it. I hardly remember how we went, but I think by way of the Sound boat, and arrived at the usual hour at New York. On landing we were immediately struck with the stillness that pervaded the city. It was still as death. There were no carriages, no pedestrians, in the street. Everything seemed stricken down. We went out into Broadway. I said to Ware, "Ware, this is Broadway." "Yes," he replied. "It is the city of the plague!" We could not choose a boarding-place. No,' he immediately said, 'I should say we found it hard to select a boarding-house. All were vacant, and to select among the vacancies was difficult. Everybody was flying from the city to avoid the malaria. Indeed, people were dying at a rapid rate. We went to the hospital. A few patients came in, and I said to Ware, "Let us mark these patients all freshly attacked, and let us take notes* of the progress of their cases." Accordingly we marked down the names and beds of those most sick. Before night one half of them were dead! I saw several beds with two women in them; one was dead, and the other still alive. I saw several dead, but unremoved, bodies lying in the ward. The medical men were all at their posts, trying to do what they could, but many of the nurses fled. It was hard to procure others. The current remark of every one was, "The disease is death!" "If a man be taken he is gone!" They did, indeed, die in an incredibly short space of time. I said to Ware, "Look at those young and apparently strong men and women, just entering the wards, persons who have a right to get well, if drugs will cure them!" And yet, at our evening visit, the attendants were laying them out! We could learn nothing that cured, and thought it useless to remain. Accordingly, at the end of three days, we decided to return to Boston to make our reports to the authorities. All was panic in New York, and *we drove a wave of panic before us*, so that, on our arrival in

the boat before Providence, a small boat came off telling us we could not and should not land. They would have no intercourse with New York. We protested, but in vain. Various messages passed between us and the town authorities. Whilst the latter were deliberating, a crowd of excited citizens surrounded the building, and declared that none should land. Finally, it was told to us that the coach would be allowed to take us up at Seekonk, on the other side of the river. Seekonk is in Massachusetts, and that State might take care of itself; but none coming from New York should traverse Rhode Island. We retreated to Seekonk, and got back to Boston about midnight. The next day we reported to the city council. Our report was so unfavorable that its worst parts were not allowed to appear in print, for fear of exciting a panic in Boston.

"I referred again to the memorable fact that, while all else were flying from the pestilence, the physicians stood bravely at their posts. He added this noble tribute to our profession. 'During my life, I never have seen a medical man refuse to attend upon any case, however dangerous, when he alone was concerned. Where he would be liable to carry contagion to any other patient, he would of course decline, and thereby resign virtually his practice.' Then, as if thinking that, as a general rule, no physicians ever regard personal danger when called to one sick, he added: 'I can truly say that, while in New York, the thought of danger to myself never once occurred to me.'

"I spoke of the modern ideas involved in the expression 'State or Preventive Medicine.'

"'Epidemics usually,' he said, 'have been short, though at times severe, and when finished the people feel relieved, but have taken no measures of prevention for the future.' To the thought of state or preventive medicine, as at present understood, his mind had evidently not been led. Probably this was natural, because his life-work had been simply to destroy our sovereign faith in drugs, and to fasten the belief that diseases once produced would in many, perhaps in most, instances run their course, and that the most that physic (using the term in its widest sense) could do would be to relieve and palliate the more prominent symptoms. In other words, his labors, after resigning his professorship of *materia medica* were, first, utterly to break down what little confidence he had given us in the *materia medica*; and, second, to inculcate in us a love of nature as the curer of disease by self-limitation.

"Thus about twenty-five years after listening to Rush did Dr. Bigelow propound opinions precisely the reverse of those of his great master upon the relative merits of nature and of art, as handmaids to the physician. Neither Rush nor Bigelow seized the modern idea of state preventive medicine. In our conversation, I thought I recognized that fact, and I tried to unravel before him my views of the matter. I spoke earnestly, because I believed warmly in the future success of that idea, now just beginning to germinate in this country and in Europe. He listened attentively, and when I had described how much I hoped from the study, under the power of the State, of the causes of disease and for the prevention of them, he *chuckled* as he lay in bed, and looked like his old self, when enjoying a quiet joke. I said nothing, but expected something racy from his clear head. His assertions had been, at times, so pungent, so precise, and generally so true that I thought, from his manner

while listening to my remarks, I should get some reply a little grotesque, perhaps; but I did not expect so much of genuine good sense as is contained in the following sentences, which were poured forth with the greatest deliberation, but without the least change or hesitancy of speech:—

“Preventive medicine! Well, doctor, you lay out a wide field! You will have to prevent intemperance! How can you prevent the imprudent exposure of men and women? You will have to teach them what common sense calls prudence. For example, suppose a public ball or public dinner; how prevent men and women from running into that fire? You will need almost despotic power to do that. Then, if you should attempt to use your power, you would have fifty thousand opponents to rise up against you to prevent your orders from being carried out.’ Here he remained silent, and then quietly brought out the following most wise culmination of all our talk: ‘All that can be done will be to try to open the eyes of the people to the dangers which surround them, by a candid exposition of the facts and of their consequences.’ And perhaps that *is* really all that can be done, but even that is a vastly nobler, if a heavier, task than to carry on contests like those of preceding ages for the support of many theories, set up by one great leader after another, each and all to be knocked down by their successors.

“I left Dr. Bigelow after a two hours’ conversation with him, deeply impressed with his really very able mind, which at the age of ninety was so clear, so sagacious, so witty, and so precise in thought and in the choice of words to express those thoughts. I had spent a most delightful morning, away from the turmoil of the hour, in the presence of a representative of the past, of one capable of comparing from his own experience the thoughts of almost the beginning and end of our centennial period. After bidding him good-by I talked, a little while, with members of his family. As I had been led to respect him by what I had previously known of him as a physician and a man, and as I saw him on his bed of helplessness, so I was led to hold him in still higher honor when I learned the following facts: He began to be blind in 1870, and he had been totally blind for more than two years. In 1873 he had a slight hemiplegia, and though previously able to walk about under the guidance of an attendant, he had, since that time, been wholly confined to his bed. And he was becoming still more helpless every year. He made no complaints, though he said jokingly to Dr. Storer a few months since, ‘To live till one is ninety is not what it is cracked up to be.’ He never gave any expression of unhappiness in the presence of others. He had some one to read to him daily, and thus had not allowed his mind to become dull, morose, or stupid by feeding upon its own lot. In fact, as one of his family expressed herself very graphically and charmingly, ‘his deportment is so sweet and gentle on all occasions that his friends almost forget that he is so helpless and so permanent an invalid. He sleeps often in the day, and quietly like a child at night.’ I asked what he said of his thoughts of a hereafter. The reply was: ‘He rarely speaks upon the subject, and dislikes to talk of theological doctrines, even of Christianity. But his faith in God is unbounded. He says, “I believe; help thou my unbelief.” He believes in and hopes for immortal life.’”

At the conclusion of Dr. Bowditch's remarks the resolutions were unanimously adopted, and the society then adjourned.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

A. M. SUMNER, M. D., SECRETARY.

MAY 6, 1878. *Chest Expansion in Pleurisy.*—DR. CALVIN ELLIS showed an instrument for testing the expansion of the chest which proved the fallacy of the non-expansion theory in cases of pleurisy with effusion. He said that in observing a certain number of cases the diminution of motion so generally described was not seen. But for the purpose of measuring the exact amount of expansion, he arranged an apparatus which showed upon a scale the relative expansion of various parts of the chest. The application of this in a case of pleurisy, where the effusion rose as high as the second rib, gave the following results: In the axillary region, about midway, over the pectoral muscles and under the clavicles, on both sides the expansion was the same. With the aid of this, or some similar instrument, in a sufficient number of cases, the exact amount of movement could be easily ascertained.

DR. BOWDITCH asked if he had ever tried the instrument on the lower angle of the scapula, because, from what he had seen in cases of pleurisy with large effusion, there seemed to be a decided difference between the expansion of the two sides at this point.

DR. ELLIS stated that he did not apply it there in the present case, as the patient was lying on his back in bed.

DR. BOWDITCH spoke of a case he had seen with Dr. J. G. Blake. The patient, a male, had come from one of the New York hospitals, where he had been told that there was fluid in his chest, but the physicians did not approve of tapping. He had been sick for some months, and the fluid seemed to be in small quantity, the flatness being below the angle of the scapula. Dr. Bowditch did not examine in reference to the pleuritic line, which is one of the most striking diagnostic points in pleurisy. There was fine crepitation in various parts of the lung, front and back; very little expectoration, with great dyspnoea. He considered it a case of inflammatory action of a chronic character, the lung as well as the pleura being involved. The chest was tapped May 3d, between the eighth and ninth ribs below the angle of the scapula, where crepitus could be heard. Three pints of fluid were drawn off, with great relief, and there has been no return of the fluid. Dr. Bowditch spoke of another case, where there was gurgling and what seemed to be a cavity. The chest was tapped, and a quantity of pus was withdrawn, with relief. Dr. Bowditch wished to lay particular stress on the importance of tapping in that class of cases in which oftentimes one would think that he was pushing the needle into the lung instead of fluid, but in these cases there have always been the dead flatness of pleuritic effusion, orthopnoea, and perhaps other severe general symptoms.

DR. TARBELL wished to ask Dr. Ellis if, in the case he spoke of, he believed, by other evidence than the instrument, that the affected side expanded as much as the well one. He asked this question on account of the many inaccuracies which might creep into the investigation on account of the patient's back not

being supported, or by too great pressure by the patient on the instrument. He stated that he was not a believer in the immobility of the chest in pleurisy.

DR. ELLIS replied that he had other evidence. He considered it very important that the patient's back should be kept immovable by support. He first arranged an ordinary syringe in such a manner that the expansion of the chest acted upon a column of water, and showed upon a scale the amount of variation. He then tried two india-rubber bulbs, like those of the Davidson's syringe, without any effect upon the column of water; this failure was found to be owing to the fact that the ovoid bulbs changed their form under pressure without a change of capacity. And, finally, the apparatus shown was found to be the most efficient.

Typhoid Fever. — The regular reader for the evening, DR. C. E. STEDMAN, then read a paper entitled *One Hundred and Fifty Cases of Typhoid Fever*, which is reserved for publication.

DR. H. W. WILLIAMS spoke of patients' distaste for alcohol, on the recovery from typhoid fever, having taken large quantities during the illness. He mentioned a case that came under his observation, where the patient had been in the habit of taking half a bottle of brandy a day for a long time without any unpleasant effects, but on recovery not even a drachm could be borne.

DR. STEDMAN, in reply to Dr. Ingalls, said that the youngest patient that had come under his care last summer sick with typhoid fever was two years old. Small children almost always did well. In the list of cases which he had just read, all children recovered, except one, who died from perforation of the gall-bladder.

DR. BOWDITCH wished to ask about the case reported where death ensued from rupture of the gall-bladder, and yet the case was set down as typhoid fever. At the autopsy, were the characteristic lesions due to typhoid fever found?

DR. STEDMAN replied that they were not, except some enlargement of Peyer's patches, but that there was elevated temperature.

DR. BOWDITCH remarked that rupture of the gall-bladder in typhoid fever was of very rare occurrence.

DR. STEDMAN said that all the other members of the same family were brought into the hospital sick with typhoid fever, and so he classed this case as one.

Ten Cases of Melancholia. — DR. J. B. AYER read a paper entitled *Ten Typical Cases of Melancholia*.

Nine were seen at the McLean Asylum and one in private practice. All were married men. Insanity manifested itself at a late period in these cases, — it appeared between the ages of thirty-one and sixty-two. Four of the cases were between fifty and sixty. Five had out-of-door pursuits, and five were sedentary in their habits and business. All were industrious when well. In most of the cases the invasion was gradual. The exciting causes were, in order of frequency: (1.) Worry lest accounts were not kept properly. (2.) Loss of property. (3.) Partial sunstroke. (4.) Overwork in counting-room. (5.) Inability to find employment. (6.) Inability to work on account of failing eyesight. (7.) Worry on account of wife's drunkenness.

In five of the cases there was hereditary tendency, and the patients had previously been more or less peculiar. In six cases out of eight the symptoms appeared between May 1st and September 1st.

Three were suicidal or homicidal cases, and three of the others were suspected. Probably hallucinations and delusions existed in every case, but the patients rarely revealed them. Occasionally, when thrown off their guard, they would admit that they were guided by voices which directed them to do penance, abstain from food, etc. One patient who was pressed very hard to tell why he would not eat without compulsion, although he was very hungry, finally said, "It's God's food; I must not eat it." These patients were invariably worse in the morning. As far as I know, all their attempts at suicide or homicide were made early in the day, sometimes on waking out of a sound sleep. Two of the patients have apparently recovered, and have attended to business for upwards of a year. In two there were relapses. One, who was removed from the asylum after five months there, continued to improve for a while, but in four months became dull, despondent, and irritable again, and was returned. He is now improving. The other patient was taken ill in 1864, and recovered in twenty-one months. He attended to business, and was considered well for ten and a half years, then became suddenly depressed, was brought back to the asylum, and died a year later in an attack of angina pectoris. With one remarkable exception the cases of long standing became gradually demented, the physical condition at the same time often improving. The patient referred to is a typical case of melancholia; but while avoiding companionship he reads incessantly, is thoroughly well informed, and retains full possession of his faculties. A recent contributor to the *British Medical Journal* asserts that the "insane lose the power of weeping, and only with returning reason can unloose the fountain of their tears." This is entirely opposed to my experience. Three of the cases mentioned have frequently shed tears, although at the time their prospect of recovery was extremely small.

As to treatment, tonics were always indicated, generally citrate of quinine and iron with lime; frequently dilute phosphoric acid, twenty or thirty minims, or Horsford's acid phosphate, from half a drachm to a drachm, was added to each dose, with doubtful benefit. It was often necessary to add fluid extract of rhubarb or fluid extract of senna to each dose of the tonic.

In cases of subacute melancholia, where the patient was not in a condition of stupor, morphia in doses of one sixth to one third of a grain thrice daily, and a double dose at bedtime, for months often acted as a nervous tonic without manifesting to any great degree the usual disagreeable effects. For excitement combined with sleeplessness, chloral with bromide of potash, of each ten to twenty grains every hour and a half to two hours, worked well. Except when cerebral congestion existed, bromide of potash did not benefit. Dr. Jelly states that bromide of potash given to patients suffering from melancholia for a length of time often has a very injurious and depressing effect. When patients began to improve they would still remain restless at night. It was necessary to change the sedatives, or to give them in new combination. Hyoscyamus often did well for a few nights. In one convalescent case a bottle of lager at bedtime was better than medicine. The patients were required to take sufficient food. The danger from inanition was seen to be so great that they were compelled to take three full meals daily, and at times they were fed through the stomach tube. I made repeated efforts to get them interested in matters apart from themselves. It was hard to make them ride or walk outside the hospital grounds. They did not wish to see relatives or friends, and took no pleasure in social entertainments. I induced one patient—a professional gardener—to try light work in the garden, but after working a couple of hours he declined to do more.

Another said he had been fond of sawing wood; so I took him to the wood-pile and invited him to work. In a few moments he laid down his saw, and said that he had had enough. As he was a farmer we next tried to interest him in cattle, etc., but without success.

Only one of the cases was treated outside of the asylum. He was advised to enter, but his friends refused. It was then recommended that he should buy a farm and become a farmer. This experiment was carried out, and was completely successful. In three or four months he seemed entirely well. Still it was a somewhat dangerous course to try, as he had shown symptoms of a suicidal tendency.

SAYRE'S CONSPECTUS OF ORGANIC MATERIA MEDICA AND PHARMACAL BOTANY.¹

THIS book might be considered a desirable abridgment of the now classical Pharmacographia of Flückiger and Hanbury, and of certain portions of the United States Dispensatory, were it better done. The plan is good, and the information in most cases correct, but the author, in his zeal to save the time of the student of medicine or pharmacy, has apparently saved a good deal of his own, which should have been devoted to making his sentences intelligible, to say nothing of their being in good English. The compound of hasty abbreviation, bad spelling (for example, Pettinkofer, Troemner, watermellon, microphyle, etc., etc.), bad Latin, and worse English is simply abominable.

The definitions in the botanical portion are far from satisfactory. For example, "Albumen. The flowery [query floury?] part [of the seed]." As to the table of antidotes, many persons might well prefer to take their chance with the poisons than with the antidotes, as they are there given, promiscuously, without the slightest attempt, even in the order in which they are mentioned, to indicate the reason or occasion for their use.

To conclude, the book is well meant, but should be almost entirely rewritten before it is fit to be placed in the hands of students.

MAYS ON THE THERAPEUTIC FORCES.²

WE fear that this little book only adds another to the numerous unsuccessful attempts to establish general laws in therapeutics. The author supposes that the action of "chemical stimulants," alcohol, cod-liver oil, phosphorus, and oxygen, consists in their generating force by their chemical affinity for oxygen, or (in the case of oxygen itself) for oxidizable substances, while the "mechanical," quinia and other bitters, iodine, opium, irritants, and cold, are thought to excite molecular motion by friction. The latter part of the theory is too theoretical to be either affirmed or denied upon any experimental basis.

As to the first part, the author seems to have fallen into the somewhat seductive error of supposing that because various forms of force are exactly correlated they are interchangeable at will, and that heat may, if necessary, become vital or nervous force. In fact, we know very well that there may be in the body an abundance, or indeed a superabundance, of heat, and yet the vital forces may be at a very low ebb.

The time for extreme generalization in therapeutics has not yet come, but we would by no means deprecate on this account any thoughtful attempt like the present to solve the problem. Though many a theory will be set up and

¹ *Sayre's Conspectus of Organic Materia Medica and Pharmacal Botany*. Comprising the Vegetable and Animal Drugs, their Physical Character, Geographical Origin, Classification, Constituents, Doses, Adulterations, etc. Table of the Tests and Solubilities of the Alkaloids appended. By L. E. SAYRE, Ph. G. Philadelphia: D. G. Brinton, 115 South Seventh Street. 1879.

² *Mays on the Therapeutic Forces*. By THOMAS T. MAYS, M. D. Philadelphia: Lindsay and Blakiston. 1879.

fall to the ground before the Newton of therapeutics shall write its *Principia*, yet the framing of these theories, as well as their refutation, can hardly fail to be of mental profit both to the philosophic writer and the critical reader.

MUIR'S PRACTICAL CHEMISTRY.¹

THIS is a small pocket manual upon qualitative analysis, and gives but a very few of the tests with which it is necessary for the medical student to be familiar. The little material which it does contain is very badly arranged, and can be found much better stated in the ordinary text-books on qualitative analysis. Moreover, we do not agree with the author in considering that a medical student needs only to know a few tests for the simple salts. W.

QUARANTINE IN YELLOW FEVER.

DR. S. OAKLEY VANDERPOEL, health officer of New York, has just made his annual report to the quarantine commissioners, and much of it is naturally devoted to the subject of yellow fever. While he does not believe that the most absolute cleanliness will prevent an epidemic of the disease if the germ is deposited under favorable conditions of heat and moisture, he expresses the opinion that its type and persistence will depend upon the amount and character of the filth it finds to favor its propagation. During the year 1878 forty-five cases of infectious disease were in the lower bay and at the hospital, and of these thirty were yellow fever. There were fourteen deaths, and from June 9th until September 30th there was not an interval of three days without there being one or more cases of yellow fever in the bay. Dr. Vanderpoel is fully alive to the evils incidental to the presence of the disease, but at the same time he is not willing to admit that they furnish an excuse for those stupid measures—born of panic and ignorance—which would impose absolute restriction and bring trade and commerce to a stand-still. "A resort to such measures," he says, "would be a poor commentary upon the progress of medical studies and hygiene during the century. If at one swoop we are to blot out the favorable experience of this port, and be relegated to the non-intercourse which characterized some of the monasteries during the epidemics of the Middle Ages, it would be an unfortunate blow to the vast commercial interests which connect us with the tropics." He condemns the kind of quarantine maintained at New Orleans, which he says ignores the elementary principles which govern such institutions in other places. Two chief points must be taken into consideration: first, the incubation period of the disease, and, second, its mode or manner of transmission; and if these are properly recognized, he holds that a quarantine at New Orleans can be made as effective as at New York.

But, after all, Dr. Vanderpoel believes that the best way to deal with yel-

¹ *Practical Chemistry for Medical Students.* By M. M. PATTISON MUIR, F. R. S. E., Prælector in Chemistry, Gonville and Caius College, Cambridge. London: Macmillan & Co. 1878.

low fever is to check its development and spread at the fountain-head, and he therefore devotes a great portion of his report to the consideration of the hygienic condition of Havana, and accompanies it with the letter which he addressed to President Hayes on the subject during the recent epidemic in the South. After dwelling upon the very bad sanitary state of Havana, he shows that, on account of its peculiar location, vessels in its port are compelled to lie in the focus of all the impurities and stifling exhalations of the city, and that they are consequently specially liable to become infected while there. The practical result of a consideration of these facts is the admirable proposition which he makes, that the government of Spain be solicited to unite with that of the United States in the appointment of an international commission, which shall proceed to Havana with a view to examine the sanitary surroundings of that city and their relations to the propagation of the scourge, and that the Spanish government be earnestly requested to carry out fully the joint recommendations of such commission.

MEDICAL NOTES.

—The experts authorized by Congress to investigate the epidemic of yellow fever submitted their report on January 30th. They acknowledge their investigations, owing to lack of time, to be incomplete, and advise that two or three skilled experts be charged with a completion of the task, and that at least two be authorized to study the disease at its home in the West Indies, and that the coöperation of other governments should be obtained in this work. In regard to future quarantine, two classes of officers are suggested, one for foreign and one for home service: the former making themselves familiar with all diseases prevalent at the parts at which they are stationed, and with the medical history of ships trading to or from their respective ports; the latter to have charge of quarantine stations, and to supervise interstate travel and traffic from infected places in time of epidemics. To carry into effect an efficient system of quarantine, a central health department and an advisory board of health are advised to frame needful laws. The board looks upon the disease as an exotic in all countries except the West Indies, and in all of them its introduction can be traced either directly or indirectly to the West Indies.

—In regard to the recent reports of the plague in Russia an English exchange of the date of January 18th states that they originated from an outbreak of typhus brought by a returning body of Cossacks into the province of Astrachan. Late in December, following a sudden thaw, a fatal outbreak occurred, carrying off one hundred and forty-six people out of a total population of six hundred. A panic seized the people, which seems to have affected the government, and quarantine regulations have been strictly enforced. In spite, however, of these reports the term plague continues to be used.

—The conflicting theories in regard to the death of Barron, the cashier of the Dexter Bank, who was found handcuffed and gagged, with a cord twisted about his throat, in a dying condition, in the vault of the bank, brings into a strong

light the importance of a post-mortem examination in inquests of such importance as the one held in this case. The theory now set up by the detectives, nearly a year after the occurrence, is death from suicide by morphine poisoning. The report of the physician showed that there were marks of external violence, and a general condition which one might interpret as that of concussion of the brain. The man who for a year has been held up as a hero is now charged with grave crimes. An examination could have definitely settled whether the injuries were such as to have caused death, and had sufficient evidence not been found to sustain the theory such facts would have led to an examination of the contents of the stomach, and the poisoning theory have been definitely determined.

— In our allusion last week to the comparative age of the *Medical Press and Circular*, — which claimed to be *second* in age among medical journals in the English tongue, — there was an error as to the age of the *American Journal of the Medical Sciences*. In its present form that journal was first issued in 1827, or about three months before the first issue of this journal. The order, then, is as follows: *London Lancet* born 1823; *American Journal of the Medical Sciences*, latter part of 1827; *Boston Medical and Surgical Journal*, February, 1828; *Medical Press and Circular*, 1837.

— The Vienna correspondent of the *British Medical Journal* says: —

“This session our American cousins still show their anxiety to keep pace with the front rank in medicine. We believe they number sixty or more. From Britain we notice a few: from Ireland, three; a dozen or more from Scotland; and but few from England. Thus many of the more private classes are almost purely composed of English speakers. We have heard many American gentlemen say they would prefer studying in England if only London could afford the facilities of Vienna in proximity of various classes and their convenience in choice as to hours; further, it has been said that very many more would study in London than here, because the German language is so difficult, and the expenses so high in Vienna. Among the students here are three ladies, one American and two Russian.

“Apropos of woman's sphere, it is certainly considered more than usually extensive here than in some places; for all sorts of nurse-work and dressing, even in the syphilitic wards, seems delegated to women, who remove dressings before the students in a business-like manner, rather startling to one who has never seen the like beforehand.”

— Mr. Siebold, of London, referring to the popular impression that only green wall papers are to be feared, says that out of sixty to seventy wall papers — blues, reds, browns, pinks, etc. — analyzed by himself, ten only were harmless; the remainder contained arsenic.

— The possibility of true bony union in fractured patella being denied by many surgeons, the following will be read with interest: Mr. W. I. Wheeler exhibited at the Pathological Society of Dublin a specimen of fracture of the patella in which true bony union had taken place. The patient was a man aged twenty-one years, driver of a milk-cart. In September, 1875, he had been admitted to the City of Dublin Hospital, suffering from a transverse fracture of the patella; the fragments of bone were separated by an interval

of two inches and three eighths. He was treated by the application of ice, Mr. Wheeler's pads, and a starched bandage. When he left the hospital, on December 13th, there was no separation between the fragments. He subsequently resumed his occupation, and got up and down over the wheel of a milk-cart two hundred and forty times a week. Symptoms of phthisis set in, and finally he succumbed to that disease. During life there was no perceptible diminution in the volume of the quadriceps muscle, the movements of the patella were not impaired, and there were no spasms of the quadriceps.

— Upon the occasion of a recent concert at the Cincinnati Music Hall by Wilhelmj and the orchestra, the programmes were bordered with black, as a mourning tribute to the late Dr. Landon Longworth, who was a professor in the College of Music.

— Professor Gorup-Besanez, author of a large manual on Physiological Chemistry, recently died at Erlangen.

— The *British Medical Journal* for December 14th, contains the following: "M. Dumontpallier (Société de Biologie, *Le Progrès médical*, December 7, 1878) related some experiments with reference to sensation made on students at the hospital of La Pitié, which are particularly interesting in connection with the recent lectures of M. Charcot, Professor Gamgee, and Dr. Hughes Bennett, in our columns, on the subject of modifications of sensation in hysterical and other forms of anæsthesia. Ether was sprayed on the right arm; sensibility disappeared little by little in the parts in contact with the ether. At the same time, sensibility notably diminished in the corresponding area of the left arm. These phenomena are absolutely identical with those which are observed in hysterical women, and nevertheless, we are assured, the young men on whom M. Dumontpallier operated were not hysterical. One of his externes, who underwent the ether-spray operation, has prepared an account of his experiences, which M. Dumontpallier submitted to the society. M. Dumontpallier added that it was true that some other experiments had not produced any positive results. M. Laborde declared that the phenomenon of transference was scarcely evidence of the reality of the facts adduced, and recommended M. Dumontpallier to experiment upon himself. Perhaps, in some pathological conditions, subcutaneous injections of atropin might modify symmetrical hyperæsthesia. M. Dumontpallier, in reply to M. Malassez, said he did not believe in the phenomena brought forward, until he saw the thermometer rising at the moment when return of sensation commenced."

NEW YORK.

— Another new medical journal is shortly to make its appearance. It is to be a bi-monthly, published by the Putnams, and it is stated that a high order of excellence will be aimed at by those conducting it. The chief editor is Dr. E. C. Seguin, and he will be assisted by Drs. T. A. McBride, L. A. Stimson, and M. D. Mann. With the exception of Dr. Stimson, who is professor of pathological anatomy in the medical department of the University of New York, all the editors are identified with the College of Physicians and Surgeons. The title of the journal is to be the *Archives of Medicine*, and its first number is announced to appear in February. It is a continuation of the

Archives of Scientific and Practical Medicine, formerly edited by the same gentleman in conjunction with Dr. Brown-Séquard, and of the American Clinical Lectures.

— At the trial of a certain "Dr. Baker" for giving a false certificate as to the cause of the death of a young woman upon whom one "Dr. Bradford" produced an abortion which resulted fatally (for which the latter was sentenced to state's-prison for fifteen years), the counsel for the defendant requested that his client be tried by a jury of physicians, his only "peers" in a medical case like this. The judge, however, decided that a common-law jury would be perfectly competent to try the case, and in giving this opinion rather naively added that he did not believe that twelve physicians could be found who would agree on anything.

— The number of cases of scarlet fever reported in New York last week was 184. Of diphtheria in the same time there were 64 cases. The week before the total number of cases of scarlet fever reported was 216, and of diphtheria 54. At the health department it was said that these diseases were diminishing in tenement districts, and increasing in first-class private houses.

PHILADELPHIA.

— Professor William Goodell presented an interesting paper, at a recent meeting of the County Medical Society, upon vegetations of the endometrium, the term including a variety of small growths developing upon the mucous membrane, and leading to congestion and menorrhagia. Of these, he described: (1.) *Fungous Degeneration of the Endometrium (endometritis hyperplastica)*, a non-malignant condition, for which he recommended the curette, with subsequent applications of tincture of iodine. In long-standing cases, a repetition of the operation is sometimes required, and nitric acid may be substituted for the iodine. (2.) *Villous Degeneration of the Endometrium* is not much unlike the preceding variety, except that the growths are more like pieces of boiled tapioca or fragments of brain than ordinary granulations. Submitted to examination by different microscopists, they were variously pronounced *villous cancer*, *papilloma*, *cystic papillary adenoma*, and a similar case in Dresden was considered by Hirschfeld to be a *cylinder-celled adenoma*. Cases have also been reported by Drs. Lusk of New York, Breinig of Pennsylvania, and Matthews Duncan. The prognosis should be a guarded one; but life may be prolonged by frequent removal of the growths. (3.) *Sarcomatous Degeneration of the Endometrium* the writer declared to be more malignant than epithelial cancer. "Irregular and profuse menstruation, and intermenstrual leucorrhœa gradually becoming more and more foetid, are the first symptoms," which are afterwards accompanied by the usual signs of enlargement of the uterus and by pains. The tumor may partly protrude from the os. Its diffuse growth, the absence of capsule, its friability and placental-like structure to the touch, and later its excessive fetor, stamp it with an almost unquestionable microscopic individuality. The treatment consists in removal and cauterization, but the prognosis is very unfavorable; though the fatal termination, according to the author, might be greatly postponed by operative measures such as described.

— At the last meeting of the Academy of Natural Sciences, Dr. Leidy called attention to a mass of living hair worms of the genus *gordius*. There were upwards of sixty individuals, tangled up into a ball, from the surface of which the heads waved about like the snakes on the head of the fabled Medusa. In the mass were seven males, which could be distinguished by their lighter color and other peculiarities. The species was thought to be *gordius robustus*, although the different species of *gordius* required further study before being definitely distinguished.

Dr. Leidy also called attention to the liver of a rat containing numerous cysts, in which were imbedded cysticerci, or immature tape-worms. Numerous specimens of the mature worms were also found infesting rats, few of those examined being free from them. The larval forms were provided with strong hook-like appendages, but the mature worms were comparatively inoffensive looking, the heads being unprovided with hooks like the *tenia mediocanellata* of the human subject. The specimens exhibited had been received from Dr. Coues, of the army, and were all obtained from specimens captured in Carroll County, Mo.

The secretary announced that at the next meeting of the academy Dr. H. C. Chapman would report the results of his study of the chimpanzee which lately died at the Zoölogical Garden. His remarks will be illustrated by photographs, drawings, and dissections of the animal itself.

The director of the microscopical section, Dr. Kenderdine, exhibited a new pattern of sub-stage for the microscope, just brought out by the ingenious optician, Mr. Zentmayer, of this city, which, it seemed to him, combine features of excellence commending it to the notice of working microscopists.

— Mrs. Hannah Green, better known as "Granny Green," who was the oldest inmate of the Home of the Little Sisters of the Poor, in this city, died at that institution on Wednesday; it is believed that she was in the one hundred and fifteenth year of her age. For the past thirty years Mrs. Green had been dependent on the charity of kind friends, who, when the Home of the Little Sisters of the Poor was opened, about nine years ago, had her placed therein; an unmarried daughter, with whom she had lived up to that time, and who was then sixty-five years old, being unable through failing health to provide for her own wants, much less assist her more aged relative. In her habits "Granny Green" was always temperate, objecting to taking wine or liquor of any kind, even medicinally. She was formerly fond of smoking the pipe, but recently gave up its use. She ate and slept well, and conversed freely and intelligently, delighting in the company of visitors, though entirely blind, and confined to her bed for several years past. Not much is known concerning Mrs. Green's antecedents, or when she first came to this country, but it is pretty well authenticated that she was born in the county of Donegal, Ireland, in 1764.

— The new state hospital for the southeastern district of Pennsylvania now building near Norristown, is to be provided with electric call bells and telephones.

— Dr. J. Milner Fothergill, of London, has been elected an associate member of the Philadelphia College of Physicians.

LETTER FROM LONDON.

SEWERAGE SYSTEMS.

MR. EDITOR, — In his most interesting centennial discourse at Philadelphia, in 1876, Dr. Bowditch published the results obtained from a kind of sanitary census which he had taken prior to writing his address; and one of the points to which he called attention was the question of the disposal of sewage in the principal towns of the United States. To judge by the answers he received to his inquiries, the sewage question appears to be for the most part in a very undeveloped and one may almost say in a chaotic state in America. In England we are only at the beginning of the great struggle between health and sewage disposal; but it is fair to ourselves to say that for some years past we have been making strenuous efforts to better our position, and that we may shortly expect to see some great result from the improvements which have been, or which are about to be, introduced in the methods of dealing with our sewage. The question, so far as it concerns this country, is one of comparatively recent date, for it is only within the last forty years that any attempt has been made to do away with the primitive cess-pool system, except, perhaps, in London and one or two of the larger provincial towns, where a few rough and ill-arranged brick drains had been in use for a longer period. In 1847 an act of Parliament was passed, making it compulsory in London to connect house drains with the public sewers, and at the same time considerable efforts were made to improve the condition of these sewers, and to make them capable of bearing the new strain which was put upon them. No attempt, however, was yet made to connect the drains of the town into one great system, and for some years they remained split up into a number of independent units, the main channel resulting from each of these being carried down to the nearest point in the Thames, and its contents emptied into the river. It was not many years before the state of the river was such as to be perfectly intolerable. The water became black and stinking; no fish could live in it; the health of the inhabitants of those parts of the town which bordered the river suffered severely from the tainted atmosphere; and it was felt by such sanitary authorities as at that time existed that it was of little use to attempt to improve the general state of the metropolis whilst it was traversed by a river which had now become no better than an immense open sewer. Public opinion at length was so awakened to the existing evils that in 1858, eleven years after the power of the legislature was first called into play on the subject, an act was passed through Parliament authorizing the authorities of the town to construct a vast and complete system of sewers, by which the sewage of the whole of London should be collected into two channels, one on each side of the Thames, and should be carried down the river some miles away from London, to be turned into the stream at high tide, with a view to its being carried out to sea with the ebb. These works were completed after several years of great labor, and the Metropolitan Main-Drainage System constitutes at the present day probably the greatest engineering work of the kind in existence.

The impetus given to the development of systematic drainage in large towns

by the construction of the main-drainage works in London produced its effect all over the country, with the result that, as time passed on, one after another of the large towns of the kingdom was provided with a similar system, until at length the great majority were more or less efficiently sewered. But now arose a fresh difficulty. Comparatively few of these towns were situated like London, within a few miles of the mouth of a tidal river, and many of them had been built upon the banks of streams which passed through the centre of other large towns before reaching the sea, perhaps constituting the sole source of their water supply. It was not long before loud complaints were heard from these lower towns that their river was polluted with all kinds of excrementitious and manufacturing refuse before reaching them; that the mere presence of the stream was an offense to the town; and that it was quite out of the question to think of using the water for drinking. The position of London, though enabling her to get rid of her own refuse with as little annoyance as possible to other people, was just such as to make her the more liable to suffer at the hands of her neighbors, and being the biggest town in the kingdom, and the seat of the legislature, she was the first to make her voice heard in the matter; which she did so effectually that in 1866 she succeeded in passing a bill through Parliament which enacted that from that time no fresh outfalls for sewage into the Thames should be constructed above the metropolis, and that those towns which were already using the river for this purpose should within a reasonable time either cease to do so, or should render the sewage harmless before allowing it to flow into the stream.

This act, however, only applied to the Thames, and it was ten years before the legislation was extended to the whole country. In 1876 an act was passed called the Rivers Pollution Act, of which a short summary was given in your journal for April 11, 1878, the purpose of which was practically to make general the injunction hitherto restricted to the Thames, and to prevent the country from employing its rivers as places for the indiscriminate disposal of its refuse.

It is this act which has done more than anything else to stimulate improvement in the matter of the disposal of sewage, and which is in fact producing a complete revolution in the whole question. So few towns are altogether sinless as regards river pollution that the force of the act is almost universally felt, and all over the country experiments are being tried and systems are being carried out with a view in some places simply to the epuration of the sewage, and in others to its simultaneous epuration and utilization.

Speaking roughly, there are five different ways in which it has been attempted to dispose of sewage with safety. Four of these deal with sewage which has been removed by the ordinary method of water-carriage; in the fifth the excreta are collected in cess-pools, pails, or other receptacles which can be frequently emptied, and their contents sold to farmers for agricultural purposes.

Of the four methods applicable to the water-carriage system, the first subjects the sewage water to filtration through charcoal, gravel, or other porous substances, with the view of separating the solids prior to discharging it into the river. In the second method the same object is attained by passing the sewer

water into large tanks, where it is allowed to stand and to deposit its solids before flowing into the stream. In the third method the sewage is subjected to some form of chemical procedure to precipitate some of the material held in solution; whilst in the fourth the main principle consists in spreading the waters by carefully prepared systems of irrigation over farm lands, the purification being entrusted to the natural action of vegetable growth in conjunction with the assimilative power of soils for all kinds of organic and inorganic materials. Of these processes it is obvious at the outset that the methods of purification by simple filtration or deposition must be wholly inadequate to satisfy the requirements of the Rivers Pollution Act. It is equally obvious that the pail and irrigation schemes, if properly carried out, must settle the difficulty so far as the rivers are concerned; and with these systems the questions to be settled are whether they are practicable on a large scale, and whether they can be employed without producing other evils, which from the sanitary point of view may be almost as serious as those of river pollution. The efficiency of chemical processes in purifying sewage is a question that can only be settled by experience, and as a considerable number of such processes have been fully tested in this country it may be said that we are now in a position to speak definitely on this subject.

I will say a few words to begin with on the cess-pool or pail system. This is the plan adopted in a very large number of towns in the United Kingdom, but it must not be supposed that all of these towns have adopted it with a definite view to sanitary requirements. On the contrary, with very many of them the fact that they collect their excreta in cess-pools simply means that they have not yet arrived at that degree of sanitary enlightenment which is indicated by the construction of a distinct system of sewers, and hence that they are only prevented by their incapacity and general carelessness from offending in the matter of river pollution. In towns where this is the case the state of things is, as a rule, so horribly filthy and unhealthy that legislation is quite as necessary for them as for towns which turn their sewage untreated straight into the rivers; the only difference between the two cases being that in the latter the law has to be directed against manslaughter, whilst in the former its aim must be to prevent suicide. There is, however, a considerable number of towns, including some of our largest provincial towns, where a system of this nature has been adopted after the most careful consideration, and where the greatest care is taken to render its action efficient.

There is one great advantage which all systems of this kind have over those which are based upon water-carriage. In all towns the sewage question presents three problems: the first relates to the collection of the sewage; the second to its conveyance; and the third to its disposal. In most of our large towns the second problem is already definitely disposed of, but the first still remains a question which is almost as pressing and important as the third. All the systems dependent upon water-carriage deal only with the third problem, leaving the first wholly untouched. The cess-pool or pail system, on the contrary, deals at the same time with both of these questions, and in settling what is to be done with the excreta disposes of the problem of collection. In large manufacturing towns, where the great bulk of the population belongs to

the lower class of society, and where, consequently, it can scarcely be hoped to get the water-closet system carried out decently and healthily, some such arrangements as those which have been carried out in the poorer districts of certain of our towns will probably be found to be very efficacious and satisfactory. Various plans of this description have been followed in different towns. Thus at Hull with one hundred and thirty thousand inhabitants, and at Glasgow with about five hundred thousand, one of the methods adopted, amongst others, is to allow the privies to empty themselves into small, carefully made cess-pits, which serve also as the receptacles for ashes, the addition of the ashes being intended to deodorize the excreta, and at the same time to keep the cess-pits dry, and so prevent the evils resulting from possible leakage. The whole arrangement is under careful inspection, and the pits are emptied at short intervals by scavengers. In other places the pail system is employed. As its name implies, this system consists in placing movable receptacles under the privy seats, which are changed at stated periods by the town authorities. In some places these pails are supplied with a disinfectant; in others they are lined with a specially prepared, dry, absorbent material; whilst in others, again, ashes are used in the way described above. Some of our largest towns are largely dealt with by the pail system, as, for instance, Manchester, which with its suburb, Latford, has nearly half a million inhabitants; Birmingham with nearly four hundred thousand; Leeds with three hundred thousand; Edinburgh with about two hundred thousand; Nottingham with over one hundred thousand; and Rochdale with seventy thousand. In most of these towns the greatest vigilance is exercised in seeing that the whole arrangement is thoroughly carried out, and the results are found to be most satisfactory. As a rule, the town authorities have established large depots to which the contents of the receptacles are carried, and in which they are manufactured into a form of manure which can be carried away by the farmers without trouble or annoyance, to the surrounding districts.

I must not close this part of my subject without referring to the earth closets, which, however, have never made any great way in this country as a means of dealing with the excreta of large numbers of people. For lunatic asylums, work-houses, barracks, or small villages they have been found to be very serviceable, but they will probably never extend much further. The difficulty and expense attendant upon the preparation and distribution of the dry earth requisite for the proper carrying out of this system would be so great in the case of very large communities that this alone would be sufficient to stand in the way of its general adoption.

In my next letter I shall treat of the disposal of water-carried sewage in this country.

SHORT COMMUNICATIONS.

THE SANITARY PROTECTION ASSOCIATION OF NEWPORT, R. I.

THE objects of this association, based upon that recently found so successful at Edinburgh, and the first of the kind, so far as known, yet established in this country, are, briefly stated, threefold: First, to provide its members, at moderate cost, with such advice and supervision as shall insure the proper sanitary condition of their own dwellings. Second, to enable members to procure practical advice, on moderate terms, as to the best means of remedying defects in houses of the poorer class, in which they may be interested. Third, to aid in improving the sanitary condition of the city.

The first inspection does not cause any disturbance to household arrangements. It is followed by a report making specific recommendations, if any improvements are thought necessary. The members are not bound to carry out these recommendations. The subsequent annual inspection will, so long as the sanitary arrangements remain in working order, entail no expense beyond the annual subscription.

Each member is entitled to the following privileges in respect of property within the municipality of Newport: (1.) An immediate report by the inspecting engineer of the association on the sanitary condition of one dwelling or property, with specific recommendations, if necessary, as to the improvement of drainage, water supply, and ventilation, and a report upon the water by the analyst. (2.) An annual inspection of his premises, with a report as to their sanitary condition. (3.) Occasional supplementary inspection and advice concerning the dwelling or property in respect of which he is a subscriber. (4.) Each member by his annual payment secures the above privileges in respect of one dwelling or property occupied or designated by him. Should he be interested in two or more dwellings or properties, as owner or occupant, he may secure equal privileges in respect to them all by paying the annual subscription for each. (5.) A report, to be obtainable on payment of a special fee, on any dwelling or property, or plans thereof, which he may wish to hire or purchase. (6.) Reports by the officers of the association as to the sanitary condition of any dwellings or properties of the very poor, on payment of a moderate fee. (7.) A report, without fee, upon the sanitary condition of any public building, as church, school-house, or place of public resort, within the city of Newport.

The officers of the association are prominent men. Dr. Horatio R. Storer is the corresponding secretary, and Col. George E. Waring, Jr., is the consulting engineer.

THE METRIC SYSTEM.

MR. EDITOR, — On page 72 (January 9th), in note on Metric System, permit me to criticise.

It begins: "mi. or gr. i. equals," etc., implying that a minim equals a grain, a fluid drachm equals a drachm, etc. In fact, of course, there is a difference of about five per cent. in favor of the former.

I would suggest that the last two lines of the note be amended so as to read as follows:—

"F3 used for 3 (of water) makes a difference of five per cent. (excess). CC. used for Gms. (of water) makes no difference in the result. A teaspoonful is 5 CC.; it is 5 Gms. in the case of liquids of the specific gravity of water only."

Without disrespect to the writer of the note, I think that we may justly say that in his efforts to abbreviate he has written incorrectly.

W. H. LATHROP, M. D.

STATE ALMS HOUSE, TEWKSBURY.

THE METRIC SYSTEM IN MEDICINE.

OLD STYLE.		METRIC.	
		Gms.	
mi. or gr. i. equals	.		06
f3i. or 3i. equals	.	4	
f3i. or 3i. equals	.	32	

The decimal line instead of *points* makes errors impossible.

As .06 (Drug) is less than a grain, while 4. and 32. (Vehicle) are more than the drachm and ounce, there is no danger of giving too large doses of strong drugs.

C. C. used for Gms. causes an error of 5 per cent. [excess].

A teaspoon is 5 Gms. ; a tablespoon, 20 Gms.

REPORTED MORTALITY FOR THE WEEK ENDING JANUARY 25, 1879.

Cities.	Popula- tion. Estimated for July, 1879.	Reported Deaths in each.	Annual Death-Rate per 1000 during the Week.	Percentage of total Deaths from					
				The Prin- cipal "Zymo- tic" Diseases.	Pneumo- nia.	Diphtheria and Croup.	Scarlet Fe- ver.	Diarrhoeal Diseases.	
New York.....	1,085,000	639	30.38	20.81	13.44	5.01	9.89	1.09	
Philadelphia.....	—	324	—	—	—	3.09	1.85	—	
Brooklyn.....	564,400	262	24.13	16.78	15.27	7.64	4.58	0.89	
St. Louis.....	—	135	—	11.11	18.62	3.54	—	0.44	
Chicago.....	—	141	—	12.07	12.07	7.80	—	—	
Baltimore.....	365,000	159	22.71	11.82	13.20	8.11	1.26	—	
Boston.....	356,500	158	23.12	19.62	8.86	10.13	6.96	1.27	
Cincinnati.....	—	101	—	17.92	6.93	2.97	10.89	0.99	
District of Columbia.....	160,000	99	32.18	9.09	16.16	3.33	3.33	1.11	
Pittsburgh.....	—	—	—	—	—	—	—	—	
Milwaukee.....	—	36	—	25.00	5.55	8.33	—	2.78	
Providence.....	—	48	—	25.00	29.17	12.50	10.42	—	
New Haven.....	—	24	—	20.83	20.83	—	—	—	
Charleston.....	—	26	—	—	8.85	—	—	—	
Worcester.....	52,500	17	16.88	11.76	23.63	—	—	—	
Cambridge.....	61,400	13	13.18	15.38	16.39	7.69	7.69	—	
Fall River.....	48,500	25	26.88	20.00	12.00	12.00	—	—	
Lawrence.....	38,200	15	20.48	13.33	—	13.33	—	—	
Lynn.....	34,000	11	16.87	9.09	9.09	—	—	—	
Springfield.....	31,500	12	19.86	8.33	16.67	8.33	—	—	
New Bedford.....	27,000	—	—	—	—	—	—	—	
Salem.....	26,400	6	11.85	16.67	50.00	—	—	—	
Somerville.....	23,350	4	8.93	75.00	—	25.00	50.00	—	
Chelsea.....	20,800	6	15.04	16.67	33.33	16.67	—	—	
Taunton.....	20,200	12	30.97	—	8.33	—	—	—	
Holyoke.....	18,200	7	20.66	28.57	—	28.57	—	—	
Gloucester.....	17,100	4	12.20	—	25.00	—	—	—	
Newton.....	17,100	4	12.20	—	25.00	—	—	—	
Haverhill.....	15,300	5	17.04	40.00	20.00	40.00	—	—	
Newburyport.....	13,500	3	11.69	—	66.67	—	—	—	
Fitchburg.....	12,500	2	8.34	—	—	—	—	—	

Two thousand two hundred and ninety-eight deaths were reported: 355 from consumption, 270 from pneumonia, 113 from scarlet fever, 96 from diphtheria, 80 from bronchitis, 47 from croup, 37 from whooping-cough, 34 from typhoid fever, 14 from diarrhoea and dysentery, 10 from erysipelas, and nine from cerebro-spinal meningitis. None from small-pox or measles.

From *bronchitis* 39 deaths were reported in New York, 11 in Brooklyn and Chicago, five in Cincinnati, four in St. Louis and District of Columbia, two in Milwaukee, one in Providence, New Haven, Charleston, and Worcester. From *whooping-cough*, 23 in New York, seven in Brooklyn, two in Milwaukee, one in St. Louis, Baltimore, Cincinnati, District of Columbia, and Providence. From *typhoid fever*, 11 in Philadelphia, five in New York, four in Chicago, two in St. Louis, Baltimore, Boston, Cincinnati, and Fall River, one in District of Columbia, Milwaukee, Lynn, and Salem. From *erysipelas*, four in New York, three in Brooklyn and St. Louis. From *cerebro-spinal meningitis*, two in New York, Chicago, Milwaukee, Worcester, and Somerville, one in Brooklyn. The returns from seventeen of the nineteen cities in Massachusetts, with a population of 799,050, show an increasing mortality from scarlet fever and typhoid fever; from diarrhoea about the same, and less from the other zymotic diseases. Typhoid fever is the most prevalent of the zymotic diseases in Philadelphia. In the District of Columbia the death-rate for whites was 27.47; blacks and colored, 41.41. Diphtheria is markedly abating in Providence and Milwaukee; scarlet fever increasing in Providence. Pneumonia is very prevalent in San Francisco. Diphtheria and scarlet fever were very prevalent in Buffalo in December.

Sergeant Pursell's meteorological record for the week, in Boston, is as follows: —

Date.	Barom- eter.	Thermom- eter.		Relative Humidity.			Direction of Wind.			Velocity of Wind.			State of Weather.			Rainfall. (Melted Snow.)			
	Daily Mean.	Daily Mean.	Maximum.	Minimum.	7 A. M.	2 P. M.	9 P. M.	Daily Mean.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Duration.	Amount in Inches.
Jan. 19	29.79	24	36	16	76	51	74	67	W	SE	N	9	3	4	C	C	H	—	—
" 20	29.75	11	26	8	80	52	70	69	N	NW	NW	18	13	16	O	O	C	3.10	.03
" 21	29.97	12	23	0	73	51	82	68	W	W	S	7	9	7	C	F	S	4.15	.01
" 22	29.95	33	42	16	79	45	79	67	SW	W	S	13	14	4	O	O	H	1.00	.02
" 23	29.97	39	41	24	89	70	64	74	SE	W	NW	8	8	15	O	O	C	—	—
" 24	30.12	34	43	19	73	19	61	51	SW	SW	S	7	16	15	F	C	O	—	—
" 25	29.55	39	52	27	68	39	45	49	SW	SW	W	8	10	31	C	C	C	.30	.01

Weekly Summary.	Barometer.	Thermometer.	Humidity, Saturation being 100.	Wind.	Rain.
	Mean 29.876	Mean 27.4	Mean 63.8	Total miles trav- eled, 1647.	Total amt. .07 in.
	Max. 30.309	Max. 52	Max. 89	Prevailing direc- tion, W.	Duration, 8 hrs. 55 min.
	Min. 29.456	Min. 0	Min. 19		
	Range 0.853	Range 52	Range 70		

Barometer corrected for temperature, elevation, and instrumental error.

Explanation of weather symbols: O., cloudy; C., clear; F., fair; G., fog; H., hazy; R., rain; S., snow; L. S., light snow; T., threatening.

Station: Latitude $42^{\circ} 21'$; longitude $71^{\circ} 4'$; height of instrument above the sea, 77.5.

The death-rate for the week ending January 11th for the twenty large English towns, with a population of 7,383,999, was 27.1, a decrease of two per 1000 from the previous week: for London 27, Dublin 44.9, Manchester 35.2, Liverpool 32.4, Glasgow 28, Edinburgh 23. Scarlet fever and diseases of the respiratory organs are most prevalent. Small-pox remained about the same in London, somewhat increased in Dublin.

From the vigorous measures taken by the Russian government to prevent the spread of the plague, which has since December been the cause of great mortality in a few of the southern towns of that empire, and from the general adoption by the other governments of Europe of the best means of disinfection by fire, internal quarantine, etc., in case the disease appears farther west, it is confidently hoped that a wide-spread epidemic may be avoided. The greatly improved sanitary condition of the cities and towns of Western Europe has been apparently the chief ground for such a hope.

BOOKS AND PAMPHLETS RECEIVED. — An Analysis of Seventy-Five Cases of "Writer's Cramp" and Impaired Writing Power. By George Vivian Poore, F. R. C. P. (Medico-Chirurgical Transactions.) London. 1878.

Transactions of the American Ophthalmological Society. New York. 1878. Published by the Society.

Physiology. By Prof. James T. Whittaker, A. M., M. D. Illustrated. Cincinnati: C. R. Murray. 1879. For sale by Robert Clarke & Co., 65 West Fourth St., Cincinnati.

Rhode Island Twenty-Fifth Registration Report. 1877.

Placenta Prævia. By G. M. B. Maughs, M. D., Professor of Obstetrics and Diseases of Women, St. Louis Medical College. 1879.

Report on Neurotics. Therapeutical Society of New York. (Reprint.)

Thirty-First Annual Report of the Trustees of the Massachusetts School for Idiotic and Feeble-Minded Youth at South Boston. 1879.

A Case of Ovariectomy (Successful). By Edward Borek, M. D. (St. Louis Medical and Surgical Journal.)

Lecture Notes on Chemical Physiology and Pathology. By Victor C. Vaughn, M. D., Ph. D. Ann Arbor. 1879.